



DOCKET NO.: 4231/PCT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
IN THE MATTER OF THE PATENT APPLICATION

OF: Helmut HEINZ et al. | CONFIRMATION NO.: 5970  
USSN: 09/914,932 |  
FILED: September 4, 2001 |  
FOR: Method for Producing Circuit  
Arrangements

ASSISTANT COMMISSIONER FOR PATENTS

WASHINGTON, D. C. 20231

November 16, 2001

INFORMATION DISCLOSURE STATEMENT WITH CERTIFICATE OF MAILING ON  
LAST PAGE

Dear Sir:

- 1) Pursuant to 37 C.F.R. 1.56, 1.97 and 1.98 applicants enclose a Form PTO-1449 and make of record the documents listed thereon. A copy of the International Search Report issued on June 6, 2000 in the corresponding PCT International Application PCT/EP00/01770 is also enclosed.
- 2) This statement is being filed within three months of the U. S. filing date of the present application.
- 3) Reference AA (U. S. Patent 5,842,275) is a counterpart of British Patent Publication GB 2,304,99A (Reference AC). A copy of GB 2,304,999A is enclosed. Therefore, a copy of corresponding U. S. Patent 5,842,275 is not enclosed.

- 4) Reference AB (U. S. Patent 4,991,359) is a counterpart of British Patent Publication GB 2,224,961A (reference AD). A copy of GB 2,224,961A is enclosed. Therefore, a copy of the corresponding U. S. Patent is not enclosed.
- 5) Both references AC and AD are in English and were cited as category Y references in the International Search Report. (Category Y = Publication of particular relevance, the claimed intention cannot be considered to be based on an inventive activity, if one combines the publication with one or more publications of this category and this combination appears obvious to a person of ordinary skill).
- 6) A copy of each of references AE to AL is also enclosed. References AE, AF, AG and AH are English language abstracts of Japanese Patent Publications. All four Japanese Patent Abstracts were cited as Category A references in the International Search Report. (Category A = publication defining the general prior art, but not viewed as particularly relevant. Therefore, the requirement of a concise explanation of the relevance of references AE, AF, AG and AH is satisfied under 609.A(3) M.P.E.P.; page 600-122, August 2001.
- 7) Reference AI has an English Abstract and was cited as a "Category Y" reference. Reference AJ was cited as a "Category A and P" reference. Regarding Category A, please see above. (Category P = publication that was published prior to the international filing date, but after the claimed priority date). Therefore, references AI and AJ do not require a further concise explanation of their relevance under the above cited M.P.E.P. section.

Additionally, reference AJ is discussed in the present specification pages 2 and 3 of the literal translation.

- 8) References AK and AL are in German and were not cited in any Search Report. Therefore, the relevance of references AK and AL is discussed as follows.
- 9) Reference AK (German Patent Publication DE 35 14 093 A1 - Eidenberg) published October 23, 1986, discloses a method for closing bores provided in a printed circuit board. The bores are closed by applying to at least one surface of the printed circuit board a solder stopping lacquer which may be applied by screen printing. A template with a hole pattern corresponding to the bore pattern of the bores to be closed is applied to the side of the board opposite of the board side carrying the printed circuit. The template forms a screen through which the lacquer may be pressed into the bores by a doctor blade or squeegee. By using vacuum suction rather than a doctor blade or squeegee a second template may also be used on the printed side of the board.
- 10) Reference AL (German Patent Publication 2,400,665 - Hacke, published on July 10, 1975) discloses a method for producing a solder rejecting protection on printed circuit boards provided with through holes. In order to avoid the use of a template, an easily removable auxiliary lacquer or coating material is first applied to one side of the printed circuit board. This coating material passes through the bores in the printed circuit board and forms on the other side a masking in the form of a meniscus (10), please see Fig. 2. Then a solder preventing lacquer is

applied to the opposite side of the board. This lacquer does not stick well to the areas masked by the auxiliary lacquer and hence is easily removed to permit soldering where soldering is intended, thereby avoiding the use of templates.

- 11) Applicant respectfully requests that the Examiner consider all references of record, return an initialled and dated copy of the enclosed Form PTO-1449 to the applicants and ensure that all references of record are printed on any patent issuing from this application.
- 12) Favorable consideration and allowance of claims 1 and 7 to 11 are respectfully requested

Respectfully submitted,

Helmut HEINZE et al.  
Applicant

WFF:ar/4231/PCT  
Encls.: postcard,  
10 references,  
copy of Int. Search  
Report

By W. G. Fasse  
W. G. Fasse  
Patent Attorney  
Reg. No.: 21187  
Tel. No.: (207) 862-4671  
Fax. No.: (207) 862-4681  
P. O. Box 726  
Hampden, ME 04444-0726

CERTIFICATE OF MAILING:

I hereby certify that this correspondence with all indicated enclosures is being deposited with the U. S. Postal Service with sufficient postage as first-class mail, in an envelope addressed to: Assistant Commissioner for Patents, Washington, D. C. 20231, on the date indicated below.

Anita Morse - November 16, 2001  
Name: Anita Morse - Date: November 16, 2001



Sheet 1

Atty. Docket No.  
4231/PCT

Serial No.:  
09/914,932

**LIST OF REFERENCES CITED BY  
APPLICANT**

(REVISED FORM PTO-1449)

DATED: Nov mb r 16, 2001

Applicant: Helmut HEINZ et al.

U.S. Filing Date:  
September 4, 2001

Art Unit:

**U. S. PATENT DOCUMENTS**

*EXAMINER INITIAL		DOCUMENT NO.							DATE	NAME	Cl.	Sub- Cl.	File Date
	AA	5	8	4	2	2	7	5	12/1998	McMillan II, et al.	-	-	-
	AB	4	9	9	1	3	5	9	02/1991	Osamu OGITANI	-	-	-

**FOREIGN PATENT DOCUMENTS**

		DOCUMENT NO.							DATE	COUNTRY	Cl.	Sub- Cl.	Trans.	
													Yes	No
	AC	2	3	0	4	9	9	9	03/1997	Great Britain	-	-	x=AA	
	AD	2	2	2	4	9	6	1	05/1990	Great Britain	-	-	x=AB	
	AE	03	1	5	2	9	9	3	06/1991	Japan	-	-	x (Abst. Only)	
	AF	07	2	2	1	4	4	7	08/1995	Japan	-	-	x (Abst. Only)	
	AG	10	2	7	0	5	9	0	10/1998	Japan	-	-	x (Abst. Only)	
	AH	10	3	2	6	8	4	7	12/1998	Japan	-	-	x (Abst. Only)	
	AI	WO 86	/	0	6	2	4	3	10/1986	PCT	-	-	x (Abst. Only)	
	AJ	19	8	4	2	5	9	0	04/2000	Fed. Rep. of Germany	-	-		x
	AK	3	5	1	4	0	9	3	10/1986	Fed. Rep. of Germany	-	-		x
	AL	2	4	0	0	6	6	5	07/1975	Fed. Rep. of Germany	-	-		x

**OTHER DOCUMENTS**

EXAMINER		DATE CONSIDERED

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.